

THE WEIRD WONDERFUL WOMBAT WARENDJA WAKEFIELDI HOPE & WILKINSON.

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EXTENDED ABSTRACT

Warendja wakefieldi Hope and Wilkinson, 1982 was first described from two dentaries and six isolated teeth from a cave near Nelson, Victoria. Subsequently, a maxilla was described (Flannery and Pledge 1987) from a small cave near Comaam, South Australia. More material from the latter site has been recognised by J. McNamara, who was able to fit it to the original specimen and reconstruct most of the skull. This is described briefly below.

The skull of *Warendja* is slightly smaller than that of an adult common wombat and very lightly built. With the length of more than 155 mm (nasals and occipitals are missing), the rostrum is relatively long (about 50 mm), narrow (25 mm) and high. The zygomatic arch is low and slender, the cranium distinctly constricted anteriorly and domed behind, and there is a weak sagittal crest. The highest point of the skull is at the frontals which have a slight post-orbital prominence. The premaxillae are not complete, lacking the palatal area and posterodorsal contacts, but suggest that the narial opening was cylindrical rather than flattened and laterally expanded as in *Vombatus* Geoffroy. The maxillae are better preserved, both in the reconstructed skull (SAM P24105) and the skull fragment (SAM P31836). Contact with the frontal is unclear, but it seems there was not a narrow posterodorsal extension of the maxillary as seen in *Vombatus* and *Phascolarctos* Gray. It is not likely that the nasal made contact with the lachrymal. The palatal part of the maxilla is distinctive as indicated by Flannery and Pledge (1987), being very broad and relatively flat - unlike that of living wombats. The palatine bones bound a large palatal fenestra, extending forward to the middle of M¹. The alisphenoid is not clearly defined on all sides, but its suture, with the squamosal, skirts the anterior base of the tympanic process. The lachrymal appears not to have the tubercle that is prominent in *Vombatus* and

Phascolarctos. The parietals are almost rectangular and smoothly convex except for the lip along the medial edge where the sagittal crest is formed, and the occipital edge. The brain case is 50 mm wide at the anterior squamosal root of the zygoma.

The squamosal is incompletely known since the auditory regions are damaged in all specimens. It is rectangular in its cranial part which is evenly convex and not perforated by foramina as in modern wombats. The zygomatic wing is not as laterally extensive or as robust as in *Vombatus* and *Lasiiorhinus* Gray but is wombat-like in being dorsally flat with a well defined posterolateral rim. Its simple overlapping contact with the jugal is unlike the intertonguing contact seen in modern wombats and most other living marsupials but is similar to that seen in *Ngapakaldia* Stirton and *Muranura* Pledge. The ventral surface of the squamosal has much gentler relief than in *Vombatus*, with a broad flat glenoid facing anteroventrally. The epitympanic sinus is moderately deep, the postglenoid foramen large and ovate, and the tympanic cavity is large (7mm transverse diameter) and lined by squamosal bone. The auditory region, as preserved, is a reduced version of that seen in *Vombatus* with lower and rounder prominences.

A wombat-like femur (SAM P31854) is tentatively referred to *Warendja* because of its differences from *Vombatus* femora also preserved in the deposit. It has a smaller head, a more pointed greater trochanter closer to the axis of the shaft, a sharper shorter and lower lesser trochanter, and larger lower third trochanter. At the distal end, the anterior face is rounded rather than having a shallow saddle, the lateral condyle narrower and the intercondylar channel is parallel-sided rather than tapering upwards. These and other differences indicate that *Warendja* had a slightly different gait to *Vombatus*.

The skull of *Warendja* shows a number of features that are considered to be plesiomorphic



Fig. 1. Skull of *Warendja wakefieldi* in dorsal, right lateral and palatal views.

with respect to other wombats, while at the same time possessing several wombat synapomorphies. The synapomorphies include rootless incisors, premolars and molars, and the sole involvement of the squamosal in the tympanic process. The plesiomorphic features include: broad palate, parallel molar tooth-rows, lightly built zygomatic arches, convex rather than flattened dorsal cranial surface, and a simple glenoid region. These features further support the contention of Flannery and Pledge (1987) that *Warendja wakefieldi* was a very primitive wombat with a more gracile build than the lumbering modern wombats.

REFERENCES

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- Hope, J.H. and Wilkinson, H.E. 1982. *Warendja wakefieldi*, a new genus of wombat (Marsupialia, Vombatidae) from Pleistocene sediments in McEachern's Cave, western Victoria. *Memoirs of the National Museum Victoria* **43**: 109-120.

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